ON THE TYPE SERIES OF *ALTICA CHALYBAEA* (COLEOPTERA: CHRYSOMELIDAE)[1]

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ABSTRACT: Types are designated for *Altica chalybaea*. In addition, the median lobe of the male aedeagus, the spermatheca and styles of the female are described and illustrated for the first time.

RÉSUMÉ: L'auteur désigne les types d'*Altica chalybaea*. Il décrit et illustre aussi pour la première fois le lobe médian de l'édéage mâle de même que la spermathèque et les styles de la femelle.

Illiger (1807) described several new European, Brazilian and North-American species in his paper entitled *List of Haltica species in the Collection Hellwig-Hoffmansegg*. It is worth mentioning here that the *Haltica* of Illiger corresponded more, at that time, to the present whole subfamily Alticinae than to the genus *Altica* as it is defined today (LeSage 1995).

The purpose of the present paper is to designate a lectotype for *Altica chalybaea*, and to describe and illustrate the male and female genitalia which are not treated in the original description.

Type designation

The original series, consisting of six specimens, comes from the A.S. Knoch Collection which is currently preserved in the Museum für Naturkunde der Humbolt-Universität zu Berlin in Germany. The collection label for the whole syntype series reads: "*Chalybaea*/ N/ A.S. Knoch/ Georg. Am. Francil. (= Georgia Americana, Francillon).

LECTOTYPE. The presently selected male bears the following labels: a hand written label "*oleracea* F./ *Am. bor.* Leg." (= *America borealis* Leg.), a grey label with the number "55818" typed on it, a green label "*America bor.*/ Knoch/ Nr. 55818", and a beige label: "Zool. Mus. Berlin." I have added the following red label: LECTOTYPE: *Altica*/ *chalybaea*/ Illiger/ Des. LeSage 1999."

This specimen had been originally misidentified, probably by Knoch, as indicated on the first label. Fortunately, this misidentification does not affect the nomenclature of the species because Knoch never published it.

PARALECTOTYPES. The selected and dissected female bears a green and a beige label similar to the lectotype labels, and a small square piece of paper with the number "126" typed on it.

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The remaining syntypes comprise four specimens. A male and a female, both remounted on small cards, had been dissected in the past but their genitalia not preserved. The other two specimens are pinned males. They all bear a green and a beige label similar to those of the lectotype except for the last male which bears only a beige label. I have added the following yellow label to these: PARALECTOTYPE: "*Altica chalybaea* Illiger/ Des. LeSage 1999".

Description: The original Latin description is very scanty: *Sulcicollis, ovalis, cyanea, thorace transverso, elytris punctatis.*" (Thorax grooved, oval, blue, pronotum transverse, elytra punctate).

Illiger added the following information to the description (translation): "Originating from Georgia, North America, Francillon. According to Professor Knoch, it is also found in Pennsylvania. Length, two and two thirds lines, fairly similar to *oleracea* in shape, but much broader. The width of the pronotum exceeds its length by one-half. The posterior transverse groove is located in front of the posterior third, and is transformed into lateral grooves on the sides toward the head. The posterior margin of the pronotum is projecting in the middle, forming a flattened bow. This beetle is slightly metallic dark blue with a tendency to green. Due to fine grey setae, the antennae are brownish black, except for the basal segments which are clearly blue. The underside of the body and the legs are covered with fine, grey, inconspicuous setae. The elytra bear punctures which form anteriorly fairly close elongate series. The first segments of the anterior legs are bigger, thicker and broader than the other segments."

Other external characters such as the number of labral setae (6), the frontal tubercules (smooth), the vertex (smooth), the pronotal groove (deep), the antennae, etc. are also found in several other species of the genus (LeSage, in preparation).

MALE GENITALIA (lectotype). The terminology follows that used previously in my revision of the North American costate species (LeSage 1995).

Median lobe of the aedeagus (fig. 1), 1.9 mm long, 500 µm wide; tip nipple-shaped. On the dorsal side, ostium of moderate length, about 1/4 length of median lobe; ostium lamellae markedly asymmetrical, the median lamella being 3 times as broad as the lateral ones; first 4-5 dorsal undulations interrupted in middle at base by median depression, approximately 20 in number. On ventral side, median carina not high, barely indicated, shorter than ventral ridges; ventral longitudinal ridges short, almost parallel, about 1/7 length of aedeagus; lateral folds much reduced, little raised, less than 1/10 length of aedeagus; ventral wrinkles markedly developed, oblique, and about 20-25 in number.

FEMALE GENITALIA (paralectotype). Styles ("vaginal palpi") (fig. 2): length, 505 µm, width, 93 µm; fused for basal 1/6; tips slightly divergent; sensilla, 15 (left) to 16 (right) in number; apical setae, 13 on left, 16 on right. Spermatheca: 293 µm long; receptacle cylindrical; pump extending beyond base of receptacle; small triangular appendix present at tip; basal portion of spermathecal duct straight and relatively long; spermathecal duct apparently with 3 complete loops; valve of spermathecal gland of medium size.

Figure 1. Median lobe of the aedeagus of the lectotype *Altica chalybaea* Illiger, ventral side.

DISCUSSION

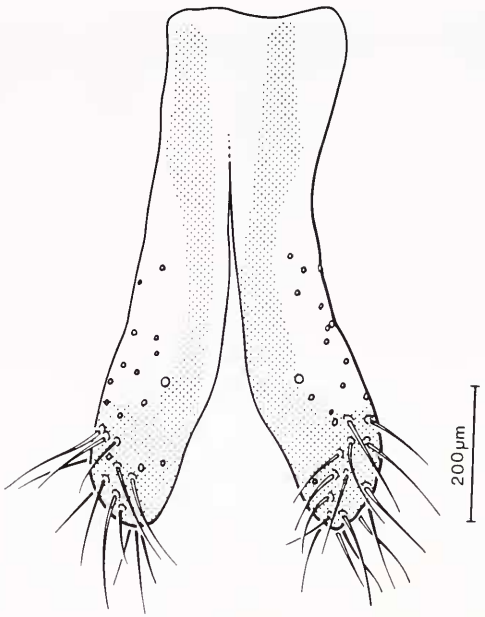
Unfortunately, the original description is not very useful for the recognition of *Altica chalybaea* although the blue color and the ovoid shape of the body are the two most noticeable external features in this species. The statement about the broader shape of the body is true but must be interpreted carefully since it applies to most females of *Altica* which are proportionally broader than males. In addition, there are several species with an ovoid body (e.g. *A. ovulata* Fall, *A. ulmi* Woods, etc.). consequently, it is not possible to recognize this species only on the basis of the body shape (LeSage, in preparation).

The character state given for the pronotum can be applied to all *Altica* species, and it is also much more variable than reported by various authors (LeSage 1995). The same observation applies to the setae on the underside of the body and legs. The broader shape of the first tarsome of the front legs is a sexual character, not a specific one as reported by Illiger. Actually, this segment, with few exceptions, is distinctly broader in males than in females in the genus *Altica.*

As regards the external features of *Altica chalybaea*, the medium size, the ovoid shape, and the blue color of the body appear to be the most distinctive ones, but these characters are useful only in combination with those of the genitalia since there are quite a few North American species with a similar size, shape and/or color (e.g. *A. ovulata* Fall, *A. ulmi* Woods, etc.).

As regards the male genitalia, the numerous oblique wrinkles on the ventral side of the median lobe of the aedeagus are very distinctive. In other species, these wrinkles are either not so numerous or not so oblique.

In the female, the diagnostic features of the genitalia of *Altica chalybaea* are more difficult to recognize because the female genitalia of most North



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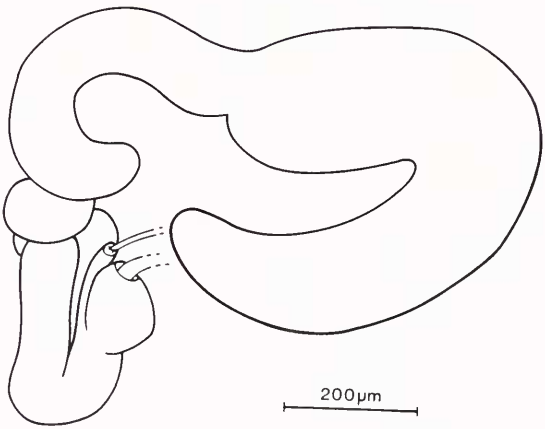

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Figure 2. Styles of a paralectotype female of *Altica chalybaea* Illiger.

Figure 3. Spermatheca of a paralectotype female of *Altica chalybaea* Illiger.

American *Altica* species are still unknown except for the costate species which have been revised recently (LeSage 1995). In *A. chalybaea*, the basal portion of the spermathecal duct appears fairly long whereas it is proportionally shorter in other species, the receptacle of the spermatheca is not inflated whereas it is distinctly so in most species, and the inner margins of the styles diverge less at the tip than those of the known species.

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